

STATE OF MICHIGAN



JOHN ENGLER, Governor

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

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HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: [www.deq.state.mi.us](http://www.deq.state.mi.us)

**RUSSELL J. HARDING**, Director

REPLY TO:

STORAGE TANK DIVISION  
TOWN CENTER  
PO BOX 30157  
LANSING MI 48909-7657

**IM-15**

September 30, 1998

TO: Storage Tank Owners/Operators and Interested Parties

FROM: Amy S. Carter, Chief, Program Support Section

SUBJECT: Storage of Flammable and Combustible Liquids in Aboveground Storage Tank Systems

This informational memorandum has been prepared to identify and clarify some of the requirements for the aboveground storage tank systems under the Storage and Handling of Flammable and Combustible Liquids (FL/CL) Rules, promulgated under the authority of the Michigan Fire Prevention Code, 1941 PA 207, as amended, being R 29.4101 et seq., of the Michigan Administrative Code. Rules R 29.4103 through R 29.4106 of Part 1 of the FL/CL Rules adopt by reference four specific editions of the National Fire Protection Association (NFPA) standards. The adopted standards are NFPA 30 and 30A, 1990 Edition; NFPA 31, 1987 Edition; and NFPA 395, 1988 Edition. These standards were adopted with Michigan specific additions and amendments and made applicable to the storage and handling of flammable and combustible liquids having a flash point below 200 degrees Fahrenheit.

**I. Plan Review and Certification.** When required tank systems storing flammable and combustible liquids require submittal of an Application for Installation of Aboveground Storage Tanks, Form No. EQP3859. The installation application fee of \$203.00 per tank includes the first annual fee. Thereafter, the annual fee is \$61.50 and is due in accordance with the regular billing cycle. The tank systems are field inspected prior to certification and at least once every three years thereafter.

The owner or installer must submit an application for Installation of Aboveground Storage Tanks, Form No. EQP3859, and a plot map in compliance with Part 2, Section 1-7.1 of the FL/CL Rules at least 30 days prior to the intended utilization of the storage tank system. A plan review report will be issued within 30 days of receipt of the plans. Upon receipt of a copy of the plan review report, the installer will notify the designated Storage Tank Division (STD) Hazardous Materials Storage Inspector (HMSI) of the starting date of the installation and will coordinate the required installation inspection. Upon completion of the installation, the installer will arrange for a final inspection. If the

installation is approved, the HMSI will certify the tank system in compliance with the FL/CL Rules and authorize the owner to place the system in use.

**Storage:** Flammable and combustible liquids are required to be stored only in tanks, containers, or in portable tanks in compliance with Part 2 of the FL/CL Rules. The FL/CL Rules also require that each tank be installed in compliance with its design and listing or approval and provides specific requirements for the separation of storage tanks from buildings and property lines. Secondary containment, intended to prevent any release from the storage tanks into groundwater, surface water, and subsurface soils, is required for most storage tank systems. Secondary containment can be provided by diking around the tanks, remote impoundment or secondary containment, or by methods other than diking and remote impoundment. These methods include vaults, special enclosures, and integral secondary containment. Secondary containment tanks require prior approval by the Department of Environmental Quality, STD.

The FL/CL Rules regulated all tank systems that store and handle flammable and combustible liquids having a flash point below 200 degrees Fahrenheit. Section 29.5c of Act 207 requires a person to obtain a plan review and certification for the following types of facilities:

- I. Storage tank more than 1,100 gallons in capacity.

There are many types of storage tank systems in this category. Each are regulated under specific part(s) of the FL/CL Rules as follows:

**1. Heating Oil Tank Systems.** Heating oil tank systems are regulated under Part 4 of the rules. Tanks that exceed 1,100 gallons in capacity and are connected to furnaces, kilns, or boilers, are required to submit a plan review, obtain approval, and to be inspected and certified by the STD.

**2. Private Motor Vehicle-Fueling Storage Tank Systems:** These storage tank systems are regulated under Part 2, and Part 3, of the rules. An aboveground storage tank that exceeds 1,100 gallons capacity is allowed only at private motor fueling locations. These storage tanks are limited in capacity. Tank systems holding Class I liquids, such as gasoline, are limited to 6,000 gallons individual capacity. More than one tank system can be located at a private motor fueling facility such as commercial, industrial or manufacturing facilities. However, these tanks must be in vaults or provided with equivalent protection such as the protected secondary containment tanks and special enclosures. Tank systems storing Class II and Class IIIA liquids used for private motor fueling facilities are limited to an individual capacity of 15,000 gallons or less and an aggregate capacity of not more than 30,000 gallons.

A vault is defined as an enclosure, above or below grade, where the floor and walls are constructed of reinforced concrete that is not less than six inches thick. The walls are required to be higher than the top of the tank. A vault may have a non-combustible top, but such a top is not required if the tank walls are at least four feet above grade.

**Please Note:** Farm storage tank systems that exceed 1,100 gallons in capacity are regulated under the same requirements as private motor vehicle fueling locations, Parts 2 and 3 of the FL/CL Rules.

**3. Public Motor Vehicle Fueling.** These storage tank systems are regulated under Parts 2 and 3 of the FL/CL Rules. These parts allow for public motor vehicle fueling from aboveground storage tank systems, only if the following four conditions are met:

- (i) The tank must be in a vault or have equivalent fire protection as approved by the STD.
- (ii) Each tank shall have a maximum individual capacity of 1,100 gallons and not more than two tanks shall be allowed.
- (iii) Dispensing shall be performed by an attendant on duty.
- (iv) The tank installation is approved by the appropriate local unit of government.

**4. Non-Motor Vehicle Fueling Storage Tank Systems.** These storage tank systems are regulated under Part 2 of the FL/CL Rules. These tank systems are usually found at industrial and chemical facilities, rail locomotive, aircraft fueling systems, marinas and terminals. There are no capacity restrictions on these storage tank systems other than those required under the design and operational requirements of the storage system. This type of aboveground storage tank system does not involve any motor vehicle fueling. Transfer of product is accomplished through a loading/unloading riser which must be a specified distance from the tank, or by a pipeline from another tank at the same facility, or from outside the facility.

**Please note:** Aboveground storage tank systems that store flammable and combustible liquids for use with stationary internal combustion engines, such as power generators and gas turbines, are regulated under NFPA 37 of 1990, which is incorporated by reference into Part 2 of the FL/CL Rules.

**II. Storage Tank Capacity of 1,100 Gallons or Less.** These tank systems require compliance with the FL/CL Rules, but do not need a plan review, and are not inspected or certified by the STD. Approval by the local authority having jurisdiction (fire marshal, fire chief) is required.

**1. Motor Vehicle Fueling at Farms, Isolated Construction Projects (Sites) and Rural Areas.** These storage tank systems are regulated under Part 5 of the rules. The separation distances from the tank system, including the vehicle being fueled, to any building must be not less than 40 feet and the separation distances to property lines must be not less than 25 feet. The dispensing area, which is usually adjacent to the storage tank system, is required to be protected to prevent spills from entering the groundwater, surface water, or subsurface soils. Only three tanks are allowed at each site and a 100 feet separation distance must be provided between sites at the same property.

**Please note:** Storage tanks on farms, isolated construction sites and rural areas, that exceed 1,100 gallons in capacity are regulated under Parts 2 and 3 of the FL/CL Rules.

**2. Heating Oil Tanks.** Heating oil tank systems of less than 1,100 gallons capacity are regulated under Part 4 of the FL/CL Rules. However, these storage tank systems do not require submittal of a plan review. These tanks are not inspected or certified by the STD and have no annual fee requirement.

**III. Small Containers and Portable Tanks.** The storage and handling of flammable and combustible liquids in drums and other containers that do not exceed 60 gallons individual capacity and portable tanks that do not exceed 660 gallons individual capacity are regulated under Part 2 of the FL/CL Rules. Approval by the local authority is required. No application for Installation of Aboveground Storage Tanks form, field inspection or certification by the STD is required.

Careful identification of the applicable rules is very important to the safe and proper installation of all aboveground tanks and storage containers storing flammable and combustible liquids. The owner of the facility is responsible for any release of these products into the groundwater, surface water, or subsurface soils.

Should you require further information, please contact the Technical Review Unit, at 517-373-8168.

cc: Mr. Arthur Nash, DEQ  
Mr. Mohammad Yusaf, DEQ  
Ms. Andrea Zajac, DEQ  
STD District Supervisors, DEQ